

(12) UK Patent Application (19) GB (11) 2 024 755 A

(21) Application No 7828954

(22) Date of filing 5 Jul 1978

(23) Claims filed 5 Jul 1978

(43) Application published
16 Jan 1980(51) INT CL³

B64D 11/00

(52) Domestic classification

B7W 21

(56) Documents cited

None

(58) Field of search

B7W

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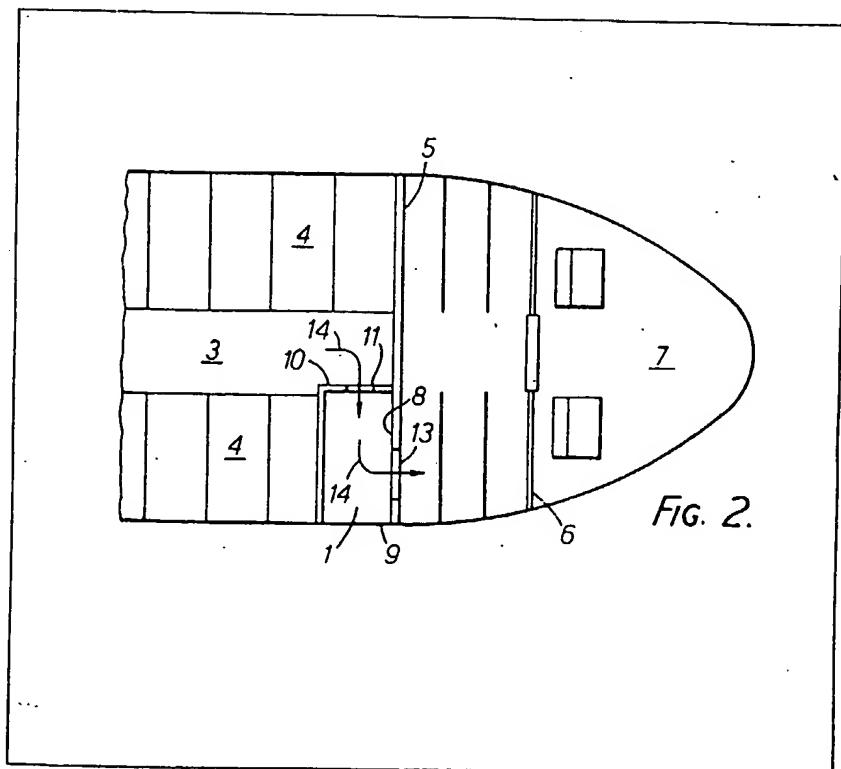
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(54) Security apparatus for aircraft

(57) In an aircraft, a cubicle 1 is provided near the front of the aircraft interior, from within which a guard can control access to the aircraft flight deck

7. One or more further cubicles can be provided elsewhere in the aircraft.



The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

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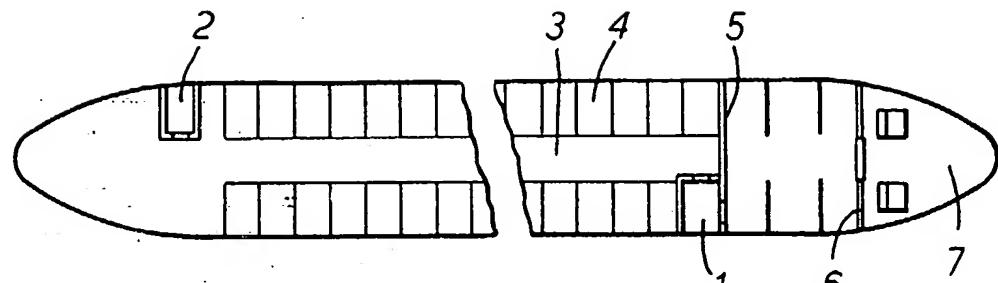


FIG. 1.

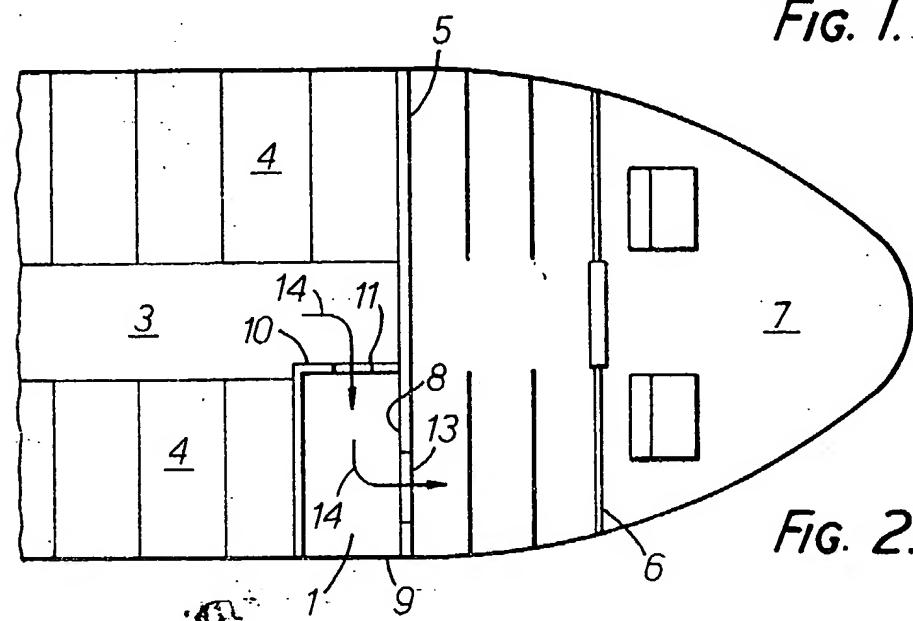


FIG. 2.

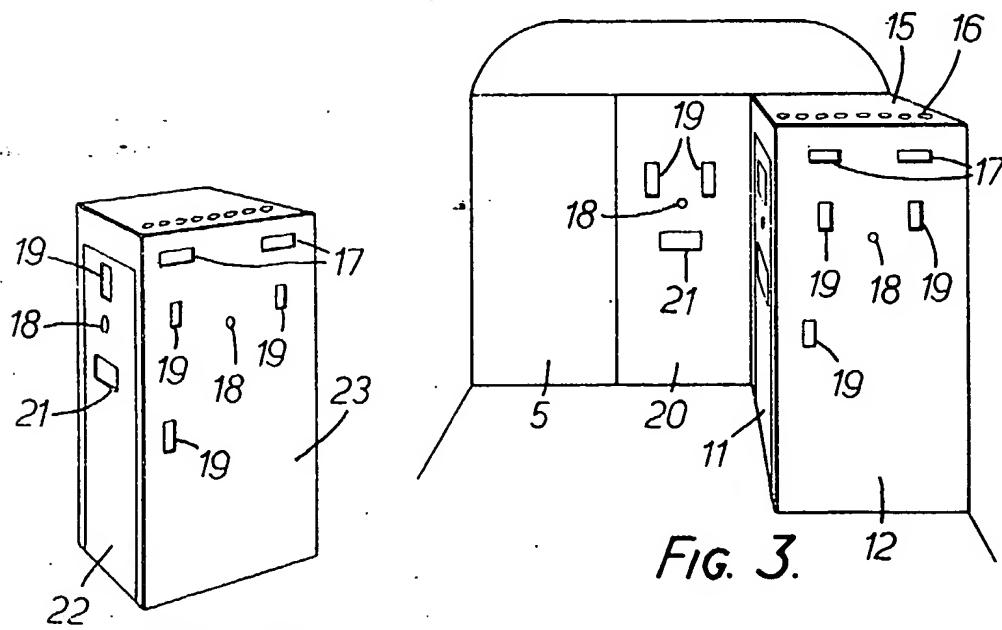


FIG. 3.



FIG. 4.

SPECIFICATION**Security apparatus for aircraft**

- 5 The invention relates to aircraft, particularly passenger aircraft, and is concerned with the problem of overcoming attempts to "hijack" aircraft or at least to discourage such attempts.
- It is known to have armed guards sitting in
- 10 amongst the passengers but such guards are vulnerable to attack by the hi-jacker(s) as soon as they become known as guards and, whilst in amongst the passengers, the guards are not usually able to prevent sudden attempts by the hi-jacker(s) to gain
- 15 access to the aircraft flight deck.
- In the invention, protection is provided for the guards and also a secure means of controlling access to the aircraft flight deck. Accordingly, the invention comprises, in an aircraft, the provision of a
- 20 cubicle near the front of the aircraft interior, from within which cubicle a guard can control access to the aircraft flight deck and also observe the passenger cabin whilst being safe from attack by anyone in the passenger cabin.
- 25 Advantageously, the aircraft comprises at least one further cubicle, including or consisting of one near the back of the passenger cabin, from within which cubicle a guard can observe the passenger cabin whilst being safe from attack by anyone in the
- 30 passenger cabin.
- In the accompanying drawings:-
- Figure 1 is a sectioned plan view from the top, of an aircraft fuselage.
- Figure 2 is a similar view of the front part of the
- 35 fuselage of Figure 1,
- Figure 3 is a perspective view of a security cubicle situated near the front of the aircraft of Figure 1 and
- Figure 4 is a perspective view of a security cubicle situated at the back of the aircraft of Figure 1.
- 40 Referring to the Figures respective security cubicles 1 and 2 are provided at the front and back of the aircraft cabin 3, at each end of the area where the passengers sit in seats 4. The front cubicle 1 is adjacent to the passenger cabin side of a strengthened bulk-head 5 which is situated a short way back from the bulk-head 6 separating the flight-deck 7 from the rest of the aircraft interior. The bulk-head 5 could be provided between the first and second class passenger cabins or it could replace the
- 45 bulk-head 6. Part of the bulk head 5 forms one side 8 of the cubicle 1, which cubicle is situated at the side of the aircraft so that a second side 9 thereof is formed by the side wall of the aircraft. A third side 10 of the cubicle 1 is provided with a door 11 leading out onto
- 50 the gangway between the seats 4 in the passenger cabin while the fourth side 12, which faces onto the passenger seating area, is provided with various observation means described later. The side 8 of the cubicle is also provided with a door 13 leading
- 55 through the bulk-head 5 between the interior of the cubicle 1 and the front side of the bulk-head 5, i.e. to the area between the bulk-head 5 and the flight-deck bulk-head 6, to the first-class passenger cabin, or to the flight-deck itself depending upon the chosen
- 60 location of the bulk-head 5. Thus, access through the

bulk-head 6 is only by way of the cubicle 1 and the two doors 11 and 13 as shown by the arrows 14 in Figure 2.

- The sides 10 and 12 and the top 15 of the cubicle 1, the door 11 and the bulk-head 5 are made bullet-proof. The top 15 is provided with a series of small holes 16, say one inch in diameter, for ventilation of the interior of the cubicle. The side 12 is provided with a television observation system 17 directed
- 75 towards the passenger seating area, a small hole or window 18 for manually observing the passenger seating area and a series of apertures 19 through which a guard within the cubicle can fire a gun into the passenger cabin. The observation system 17 and
- 80 the hole or window 18 are positioned so as to give as much of an overall view of the passenger cabin as possible while the apertures 19 are arranged so that a gun can be aimed at various parts of the passenger cabin altogether covering as much of the passenger cabin as possible. The door 11 and that part 20 of the bulk-head 5 which faces back along the gangway between the passenger seats 4 are also provided with respective observation holes or windows 18 and apertures 19 through which a gun can be aimed.
- 90 The door 11 and/or the part 20 of the bulk-head 5 is provided with an aperture 21 through which there can be passed items such as trays of food required by the guards and/or the flight-crew. The or each such aperture can be closed by a door, for example a
- 95 sliding door, which is only operable by someone inside the cubicle or on the flight deck side of the bulk-head 5.
- The cubicle 2 at the rear of the passenger cabin is situated at the opposite side of the aircraft to the
- 100 cubicle 1. One side of the cubicle 2 is formed by the side of the aircraft and the other three walls and the top are bullet-proof. The side facing onto the gangway between the passenger seats comprises a door 22 similar to the door 11 of the cubicle 1. The side 23
- 105 of the cubicle 2 and the top are similar to the side 12 and top of the cubicle 1, i.e. the side 23 has a television observation system 17, observation port 18, and gun aiming apertures 19, while the top has ventilation holes 16.
- 110 The gun aiming apertures 19 and the observation ports 18 in the two cubicles can be provided with respective doors, e.g. sliding doors, operable only by someone inside the cubicle similarly to the doors provided for the apertures 21.
- 115 Where the aircraft consists of a series of partially separated passenger cabin areas, more than two security cubicles such as the cubicles 1 and 2 can be provided. For example, there could be one cubicle at each division between two cabin areas.
- 120 Inside each cubicle, there is provided a means, e.g. a telephone handset, whereby a person inside the cubicle can communicate with each other cubicle and/or with the flight and cabin crew, and also an alarm system whereby someone inside one cubicle
- 125 and/or the flight and cabin crew can alert the cubicles or each other cubicle to a hijack attempt. For example, there could be a series of differently coloured lamps each cubicle and switches for controlling the lamps in all the cubicles, one lamp indicating a safe condition, one indicating an

observed hijack attempt, another indicating that a person in one of the cubicles is about to fire his gun off, and so on.

In use, respective armed guards sit in each cubicle 5 and keep watch on the passengers while the guard in the front cubicle also controls access between the passenger cabin and flight deck, for example by only allowing the cabin crew to come through. In the event of a hijack attempt, the guards can threaten or 10 shoot the hi-jacker(s) from the safety of their cubicles. Advantageously, the or each cubicle is provided with at least one gun adapted to fire a missile or projectile, for example a dart, containing a powerful anaesthetic capable of disabling the a hi-jacker.

15 CLAIMS

1. In an aircraft, the provision of a cubicle near the front of the aircraft interior, from within which 20 cubicle a guard can control access to the aircraft flight deck and also observe the passenger cabin whilst being safe from attack by anyone in the passenger cabin.
2. In an aircraft according to claim 1, the provision of at least one further cubicle, including or 25 consisting of one near the back of the passenger cabin, from within which cubicle a guard can observe the passenger cabin whilst being safe from attack by anyone in the passenger cabin.
3. An aircraft substantially as hereinbefore described with reference to the accompanying drawing. 30